SITE INVESTIGATIVE WORKPLAN
FOR THE
FORMER PETERSON PROPERTY
15589 American Hill Road
Nevada City, Nevada County, CA

GEOSOLUTIONS Project No. 05-156

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For Submittial To The
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1.0 INTRODUCTION

This workplan presents an outline of activities that are proposed during implementation of a future soil investigation program to be performed over the subject site (Former Peterson Property) located at 15589 American Hill Road (APN 05-100-23) and along the westerly edge of Nevada City in Nevada County, California. The vicinity of the site is outlined on Figure 1, titled Site Vicinity Map and its location is presented on Figure 2, titled Site Location Map.

During preparation of this document we referenced the newest version of the EPA guidance document titled "Preparation of a US EPA Region 9 Field Sampling Plan for Private and State Lead Superfund Projects". The latest version of this document is newer than and supersedes the 1990a version that is referenced in the January 1994, Preliminary Endangerment Assessment Guidance Manual, prepared by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC).

1.1 Purpose

The objective of this document is to outline a proposed scope of work to be implemented to determine if an environmental impact to the subject property took place by possible spillage of liquids containing hazardous materials during previous operation conducted by the site former owner. If it is determined the property was impacted the current property owner is willing to proceed with an appropriate environmental program designed to totally defined the extent of that contamination and prepare the property for remediation.

The property owner has entered into a Voluntary Cleanup Agreement with the DTSC because he ultimately wants to achieve or acquire a "Site Certification of Completion" or "No Further Action" letter from the DTSC that will allow him to utilized the property for productive economic uses.

1.2 Scope

The following outline presents a generalized list of tasks the owner suspects he will be required to complete to fulfill the objectives of this workplan. This outline was initially formulated during a meeting at the DTSC on March 1st, 2006 with Eric Wallberg, the agency's project manager. All work proposed herein will be performed in accordance procedures outlined herein the text of this document and with the Standard Operating Procedures (SOP) included as Appendix A, and safety procedures outlined in the Site Safety Plan included as Appendix B. The scope of work listed below is outlined in a sequence similar to its proposed completion:

1. Prepare and submit this workplan to DTSC for review/approval prior to performance of any on-site work;
2. After agency approval is acquired schedule field work and notify analytical laboratory of pending work and schedule analysis;

3. Perform the field operations outlined herein. After performing field operations prepare samples and transport them to the laboratory for analysis; and,
4. Upon receiving results in analytical laboratory testing reports complete the Preliminary Endangerment Assessment process with a close working relationship with the DTSC.

2. BACKGROUND

2.1 Site Description

The subject site is an irregular shaped parcel consisting of 6.78 acres. Its located along the westerly side of Nevada City, Nevada County, CA (Figure 1) and between the American Hill Road to the north and Old Downieville Highway 49 to the south near to where this roadway intersects with Champion Road (Figure 2).

Terrain across the site consists mostly of hillsides sloping downward at moderate to steep rates in southerly to southeasterly directions from higher topography located along the northern side of the site. Deer Creek is located off-site and to the south at least 400 feet away from the southern boundary of the property. This drainage directs year around flows to the west from a watershed located easterly of Nevada City. An on-site drainage feature is located along the easterly side of the property and this feature directs intermittent flows of channel runoff in a southerly direction to Deer Creek from the higher terrain located north of the site.

The surface of the property is covered with various dirt roadways, an old metal building of approximately 1,000 square feet in area, small shed, and a modern office trailer. These improvements are located mostly in the central portion of the site. In the southerly part of the property and at lowest on-site elevations there are several piles of metal debris and discarded tires. Numerous other portions of the site are covered by small piles of solid waste scattered among roadways and a moderately dense growth of under brush and conifer trees. In the northerly portion of the site a culvert is located in the intermittent stream channel and underneath the roadway providing primary access onto the site from the American Hill Road (Figure 3).

2.2 Documented Unauthorized Release

According to several documents prepared by State and Local agencies (References 4, 5, 6, 9, 10, 12, 15, 16, 20, and 21 in Section 11) there apparently was a small localized release of fluids from a limited number of drum(s) and lead-acid automobile batteries formerly stored on the property. Appendix G contains hard copies of those references. Also see the Sampling Report contained in Appendix C. Additionally, in a letter titled "Inspection Report-NCDEH Job Number 49-2471", dated September 25, 2002 (Reference 9), and prepared by the Nevada County Environmental Health Department, it was stated:

> Household hazardous waste in the form of numerous paint and solvent containers on the ground. Many of these containers were dilapidated and with unreadable labels. Many drums and fuel tanks appeared to be

randomly scattered throughout various locations of the property. Provisions for the appropriate collection and disposal of the contents was not evident. Further, the release of unknown contents from some of the containers was observed on the ground. At least one 55gallon drum was photographed having generated a white precipitate on its top, sides and on ground next to the container.

According to the current property owner this container was labeled Drum 7 and is shown on Photo 13 in the Sampling Report included herein as Appendix C. This area is also known as the G4-surface and G4-1.5 feet sampling sites described on Figure 5, herein, and in the GeoSolutions "Initial Site Investigation Workplan", dated October 20th, 2005, included herein as Appendix H. According to Sampling Report in Appendix C and the Ito, Alan K. letter (2/9/03) in Reference 17, this material contained lead at 14.2 mg/L per pH, Metals Scan, WET, SVOC, PAHs analyses by DTSC Hazardous Materials Laboratory.

These conditions were restated in a "Notice To Abate Public Nuisance", dated September 25, 2002, that was sent to Mr. Neil C. Peterson from the Nevada County Department of Environmental Health Solid Waste Local Enforcement Agency (LEA)/Certified Unified Program Agency (CUPA).

2.3 Previous Investigation(s) And Environmental Work

According to information made available by the current property owner, as early as 1987 the Nevada County Environmental Health Department expressed concerns about potential environmental issues relating to the subject property. These concerns were documented on Complaint Report Form (Log Number 1-0598-0198) authored by the Department of Toxic Substance Control (DTSC), dated May 20th, 1998, included as part of Reference 4. Throughout the late 1980s and into the mid 1990s numerous attempts (spirit of intentions contained in summation of all references) were made with the former owner (Mr. Peterson) to produced a functional working relationship that would ultimately facilitate the evaluation, and if needed, clean up of the site.

Per a letter by DTSC, dated May 23, 1995, a Mr. Hugh McGrade, an employee of the agency, performed a site walk with the former property owner on April 10, 1995. During this event eleven- 55 gallon drums containing waste oils, fuels and solvents were identified. Also identified were lead-based automobile batteries and numerous one gallon and one pint sized cans that likely contained waste paint and paint residues. The May 23, 1995 letter also stated a DTSC registered hazardous waste transporter would identify all hazardous waste located on the property (named the American Hill Junkyard) in 30 days and prepare those materials for transport to an appropriate disposal facilities, per California Code of Regulations, Title 22. Any issues relating to solid waste like scrap steel and tires were not addressed in this scope of work.

Finally, after completion of numerous technical/legal documents by agencies and local courts (References 1-7 and 9-13), on July 23rd, 2003, the DTSC served a Criminal Search Warrant to the former owner (Mr. Neil Peterson) to investigate the illegal storage of used tires and hazardous waste on the property (Reference 14). In a related follow up report by the DTSC, dated September 15, 2003, and titled "Sampling Report, Neil Peterson-American Hill, 15589

American Hill Road, Nevada City, CA 95959-2132, EPA I.D. Number: None", the findings of that work were presented. In summary, the report presents a chronology of events that took place during the collection of eleven samples (Sample Nos. AI072401 through AI072411) of contents contained in drums on the property. A sketch of sample locations included in that report was reproduced exactly as it is presented in Attachment B of the Sampling Report (Appendix C) and is presented herein as Figure 4. This report also presented findings of analytical laboratory analysis performed on those samples of materials collected from the contents contained in/on those containers and these findings are presented in Table 1 that is a reproduction (See note attached to bottom of Table 1). In summary, three samples (AI0724-6, AI0724-7 and AI0724-8) collected from fluids stored in drums were found to contain hazardous substances due to the presence of soluble metals including lead (AI0724-6 with 194 mg/L and AI0724-7 with 14.2 mg/L) and barium (AI0724-8 with 2,320 mg/L). Another sample (AI0724-4) was found to have low ignitability or flash point. Since then, all drums/containers have been removed from the property and all available documentation related to those removal, transport, and disposal operations is included herein as Appendix I.

On October 20th, 2005 a workplan was prepared under the direction of the current property owner, Mr. Paul Platner. The proposed scope of work presented in that document was tailored more to an assessment of the property's economic feasibility. If results of that work were positive the owner (tentative at that time) would be willing to make a total commitment to the site and initiate a working relationship with the DTSC, via its Voluntary Cleanup Agreement (VCA) process.

Initially, the property owner proposed collecting soil samples in P2, P3, P11, P15, P16, P17, P20, P21, and P22 staging areas per Figure 3 of the October 20th, 2005 workplan. Related analysis on selected samples was presented in the Table 2 of that workplan. Reasoning for analyses was also presented in the same table because of possible suspected chemical products and likely related hazardous ingredients that could be present.

On November 30th, 2005, an initial soil sampling program was performed to evaluate areas previously located (Appendix C) as being at risk of impact by hazardous materials like those outlined in Table 2 of the 10/20/05 workplan, and in documents included herein as Reference 17 and Appendix C. But the property owner elected to slightly modify the scope of work described in that workplan during the 11/30/05 soil-sampling program.

In summary, a total of ten soil samples were collected and included samples labeled G1, G2, G4 surface, G4-1 ½ feet, G5, G6, G7, G8, G9, and G10. Samples G1 & G2 were combined into one composite sample for analysis by the analytical laboratory. All remaining samples were analyzed separately per the Chain-Of-Custody(s) included herein as part of Appendix D. Related analytical test results are also contained in Appendix D of which a summary of those findings is reported in Table 3, herein. Based on those test results the new owner decided to complete purchase of the property and enter into a VCA with the DTSC (Docket No HAS-A 05/06-107), dated February 7, 2006. Instead of sampling the nine staging areas outlined on Figure 3 of the October 20th, 2005 workplan included herein as Appendix H, an actual soil sampling program

with sampling sites outlined on Figure 5 of this workplan was performed on November 30th, 2005. G1 and G2 soil samples were collected side-by-side within one foot of each other and therefore were mixed into one composite soils sample at and by the analytical laboratory prior to analysis. The G3 soil sample site was drop from consideration when the G4 soil sample site was modified to include a surface sample and 1 ½ foot deep sample. The remaining soil samples (G5 through G10) were collected at the ground surface at sample sites outlined on Figure 5 included herein. Related analytical test results are included herein in Table 3 and associated analytical laboratory test results reports are included herein as Appendix D.

2.4 Historical Data Review

Mr. Paul Platner, current owner of the property, prepared a historical review of operations formerly conducted by the previous owner, Mr. Neil Peterson. According to Mr. Platner this historical review is based on statements made by Mr. Peterson.

For the past 60 plus years the previous owner, Mr. Neil Peterson would repair, dismantle and sell old cars and trucks and their parts. He also owned and operated logging and mining equipment. During the process of dismantling and repairing old cars and trucks Mr. Peterson would remove waste oil and fuel from these vehicles and store these fluids in 55 gallon drums. He would then use some of this oil and fuel in his own equipment for lubrication of this own equipment and heating of this shop, respectively. The total amount of these fluids used by Mr. Peterson through the years is unknown, but between fifteen to eighteen 55 gallon drums full of waste oil were found on site totaling approximately 535 gallons of waste oil and fuel. According to Mr. Platner, all of those drums and their contents have been removed from the site and disposed appropriately through an approved waste stream. Between 80 to 100 gallons of waste flammable paint were also removed from the site with the same waste stream. Originally, there were six areas where those fluids were stored on site and apparently there was a minor amount of leakage realized from a limited number of containers. According to Mr. Platner the extent of this spillage was limited and localized. He also mentioned Mr. Peterson removed batteries from those cars and trucks and recycled them for financial reward. Since June of 2005 twenty-four batteries were removed from the site and recycled utilizing an approved waste stream. Another eight to ten batteries were found in a damaged condition and these units were also recycled. Currently, about 150 tons of scrap iron is stockpiled within the southerly portions of the property next to the road. In addition, about 4,000 old tires are stockpiled in the same generalized area of the site for easy removal. Since June of 2005, approximately 23 tons of household waste and trash have been removed from the property.

The present owner has performed a community assessment per the DTSC PEA guidance manual and the results of that work are included herein as Appendix E, titled Community Profile.

2.5 Adjacent Land Uses

The site is located along the westerly side of Nevada City as indicated in the Section 2.1, titled "Site Description". Other parcels in the immediate area are residential except for a few undeveloped parcels. Historically, the surrounding area has been part of the Nevada City/Grass Valley mining district where numerous placer/underground mines were worked in the late 1800s to early/mid 1900s. No other industry or commercial operations are known to have operated in the area or across the site except for former junkyard operations conducted by the former owner.

2.6 Utility Locations

No underground utilities are known to exist beneath the subject site and only overhead electrical and phone lines are located near the property. There are remnants of a hand made septic tank located in the central part of the property. Based on field observations is appears this cinder block structure was not ever used for its intended purpose. Also, no leach field is known to exist.

2.7 Generalized Geology/Hydrology & Previous Mining

Per the Geologic Map of the Chico Quadrangle of California (1992), published by the California Division of Mines and Geology, the bedrock unit beneath the site is of intrusive materials grading from granite to granodiorite. Age of these rocks is mid to upper Jurassic and their mineralogy consists of quartz at 20%, 70% Feldspars including Potassium Orthoclase and Sodium Plagioclase, 10% Mica, and 10% Amphibole. Their geochemistry includes mostly iron, magnesium, calcium, sodium, aluminum, potassium, silica and oxygen.

Due to type of geology beneath the residual site soils exposed at the ground surface consist mostly of light brown clayey, silty fine to coarse grained Sand, per the Unified Soil Classification System. According to the Soil Survey of Nevada County published by the U.S. Department of Agriculture and University of California, the soils are classified as Hoda sandy loam on slopes grading from 9 to 50 % on mountainous uplands. They are well drained materials underlain by weathered granodiorite and support the growth of various types of vegetation including ponderosa pines, incense cedars, black oaks, madrone, sweet birch, manzanita Scotch broom, and annual grasses and forbs. Mean elevation of this terrain typically ranges from 2,000 to 4,000 feet above mean sea level and annual rainfall is from 40 to 55 inches. Annual average air temperature is 55 degrees F and the frost-free season is 145 to 250 days long.

Surface waters flow across the site mostly during the late fall, winter and early spring. A well defined channel is etched deeply into the terrain along the easterly boundary of the site and this feature directs its periodic flows in a southerly direction from higher terrain located to the north of the site down to Deer Creek located about 400 feet south of the southern side of the property. Because of the type of soils, vegetation and topography located across the property most surface runoff drains away as sheet flows across the surface before being channeled along the easterly boundary of the property where they are discharged towards Deer Creek.

To assess the potential of historical mining activities across the site the current property owner retained a mining engineer with over ten years of experience in both exploration and production of precious metals from placer and lode type mining operations. This individual performed both literature research and on-site/regional field searches looking for physical evidence that would indicate if historical mining activities ever took place on the property or at locations in the immediate area adjacent to the site that could indirectly impact the environmental quality of the property. The following results were based on this work:

Sediments in the stream channel consist of alluvium deposited by flowing water during former flood events. These materials are composed of a distribution of particle size ranging from silts to boulders. Along the creek is evidence of former high-bench type exploration work associated with placering in sandy gravely materials located about ten feet above the bottom of the present channel. Size of the ground disturbance indicates those operations were limited in size, depth, and effort. No mine or mill tailings or mining equipment was found on the property related to lode type mining/milling operations and there was also no evidence of extensive hydrothermal alteration in bedrock exposures within numerous road cuts and side walls of the intermittent channel.

Per observations noted during a on-site reconnaissance no physical hazards related to historic mining activities were found. There also was no acid mine drainage, no evidence of impact to water quality (via turbidity or low pH caused by sulfide mineralization), no dumps of hazardous mine wastes, and no observed sign of impacts to the environment from past mining activities. GEO V SOLUTIONS performed a data review utilizing : 1) The Nevada County historical mining data base at the Doris Foley Library for Historical Research in Nevada City to assess if mining had been performed on the subject site; 2) The Nevada County historical mining data base at the Searls Historical Library in Nevada City; 3) The historical mining records titled "Mine Site In Nevada County" on file at the Nevada County Department of Environmental Health; and, 4) Mining reference books on file in the library at GeoSolutions. Per data contained in the County Assessor's Records dating back to the 1850s, State Mineralogist Report(s) there were no mines located on the subject property prior to September 1947. Also, from this time forward until sell of the site to Paul Platner the site was under the ownership of either Chester Peterson or his son Mr. Neil Peterson. Their use of the property is outlined above in Section 2.4, Historical Data Review. This record search was completed according to the required background research per the Abandoned Mine Land Preliminary Assessment Process outlined in the DTSC AML-PA Handbook.

Our literature research efforts focused mainly on the 640 acre area contained within Section 12 of T16N, R8E MDBM shown on the Nevada City 7.5 minute quadrangle. Generally, this area includes land up to ½ mile away in northerly, easterly, southerly and westerly directions in relation to the subject site. Five former major mining operations were once located in this Section:

1) The Hirshman placer mine once located in an area located immediately north of the County Government buildings on Maidu Drive was a major gold producer from placer operations. But those former operations were in small drainage draining in a southwesterly direction from the northwesterly quarter of Section 12 and not into the intermittent channel along the easterly side of the subject site;
2) The Mountaineer Mine with a portal to its underground workings located at an elevation of 2,400 feet above mean sea level (amsl). This mine was located along the north side of the Deer Creek channel but south of the Old State Highway 49 right-of-way that is the current roadway located along the southern side of the property. This mine was an underground lode mine that reportedly produced between $2 to $3 million in gold during the late 1800s and early 1900s. The mine worked a vein that resided mostly in granodiorite while striking in a northerly direction with easterly dip;
3) The Champion/Providence Mine was also an underground lode mine but situated to the west of the Mountaineer Mine and along the northern side of Deer Creek. Like the Mountaineer, the Champion Mine site was located on land to the southwest of the subject property and at lower ground elevations. This mine also followed a vein striking in a northerly direction with easterly dip, but this structure was found in both granodiorite and metasediments;
4) The Gold Metal Mine was an active lode mine also located on a vein striking in a northerly direction. It was located along the north side of Deer Creek and within Nevada City limits and in a watershed different to the one associated with the intermittent creek on the subject site; and,
5) The California Mine is located in the limits of Nevada City but on the south side of Deer Creek. It was located on the same vein in which the Gold Metal Mine was located but approximately ¼ mile apart from each other. Its distance from the subject site is approximately ½ mile.

Aside these five former producing mines, numerous other mining claims were also located in Section 12, per the Nevada County Mine Site database. But, because these additional listings are not supported by State records showing gold production that generated taxable revenues these listing are not backed up by data showing that they

were something more than claims with limited exploration work. Therefore, like most of the listings on the Nevada County Mine Site database, these particular listings did not become major gold producers capable of generating economic profit and were limited in life and extent. World mineral industry statistics support the fact that for every 10,000 prospects, only one producing mine is generated. This very high mortality rate is also embedded in the County's data base of mine sites. Factually, these listed sites are mostly claims that have long since been canceled and have been inactive throughout most of the history of mining in California and never produced anything economically.

3.0 PROPOSED WORKPLAN

3.1 Soil Sampling Program

The soil sampling program will consist of four separate parts. Work related to each part will be performed utilizing procedures presented herein and Standard Operating Procedures presented in Appendix A with safety protocols outlined in the Site Safety Plan included in Appendix B. The four parts of the soil sampling program will implemented to: a) Establish background metal concentrations; b) Assess metal concentrations in stream sediments entering and leaving the site; c) Evaluate metal concentrations in soils at specific location(s); and, d) Evaluate levels of volatile organic compound in soils at five locations. The four parts include:

1. Part 1-Collect Soil Samples To Help Establish Background Concentrations For Metals:

   We propose collecting seven soil samples to establish background metal concentrations in native soils. These samples will be collected at depths from 1 to 6 inches below the ground surface in approximate locations across the site defined by a "V" symbol on Figure 6 (See Map Legend). These seven sampling sites were selected with reference to a request made by Mr. Grant Eisen of the Nevada County Environmental Health Department. The NCEHD asked for placement of a background soil sample site at each location where a proposed home sites may be located on the property. Therefore, the sample locations outlined on Figure 6, as indicated above, were selected. It was also assumed that since the location of each proposed home site was selected without reference to past uses of the property those locations could be considered randomly selected without environmental bias. The analytical laboratory will analyze these samples according to Title 22 metals scan with EPA 6010. Each sample will be collected in an undisturbed location to help ensure natural conditions are preserved and chances for bias are minimized.

2. Part 2-Collect Two Samples To Evaluate Metal Concentrations Of Stream Sediments:

   We propose collecting one stream sediment sample in the creek as it enters the property at the site's northern boundary. A second sediment sample will be taken in the same channel but where the creek crosses over the southern boundary of the site and leaves the property. These two sample locations were selected to assess the concentrations of metals in sediments as they migrate along the channel as periodic flood waters move these

materials down the drainage system and across the site. If concentrations of metals in both samples are similar then it can be assumed the overall contribution of metals to stream sediments is negligible. Alternatively, if the concentration of metals in sediments leaving the site are elevated above concentration of metals in sediments entering the site then an overall contribution of metals to stream sediments from the property may be a possibility and further evaluation may be required. Both samples will be collected at depths from 1 to 6 inches below the ground surface. These two locations are defined by a "•" symbol also outlined on Figure 6 (See Map Legend). At the analytical laboratory both samples will be analyzed according to Title 22 metals scan with EPA 6010 test method.

3. Part 3-Collect Soil Samples In G7 Area Sited On Figure 5 With A Configuration Shown On Figure 6 To Assess Metal, VOC And Petroleum Hydrocarbon Concentrations Of Fill Materials Located Adjacent To Roadway In That Area:

Per analytical laboratory test results presented in Table 3 (3rd of 5), the soil sample labeled G7 contained lead at a concentration of 160 mg/kg. Due to this finding and conditions observed on February 14th, 2006 during a site walk with Eric Wallberg of the DTSC, the property owner shall collect five soil samples from the immediate area surrounding the point where sample G7 was originally taken. Each sample shall be analyzed according to Title 22 metals scan for hazardous waste purposes per EPA 6010.

Of these five samples, three samples shall be clustered along side the road in a line parallel to and off-set from the edge of the road by approximately 3 feet. This line of three samples will overlie the location where the G7 sample was collected during the November 30th, 2005 sampling program. Two remaining samples will be collected approximately ten feet down hill from the edge of the road and between boulder outcroppings in areas between the road and creek. These five samples will be collected at depths from 1 to 6 inches below the ground surface. Approximate locations where these samples will be taken are defined by a "■" symbol outlined on Figure 6 (See Map Legend). Within this G7 area two other samples will be collected (one at each end of the line of sampling sites) at a depth of two feet and analyzed for motor oil and diesel range organics by the EPA 8015 modified test method. In addition, one other sample (from the center sampling site) will be collected from a depth of two feet and analyzed for volatile organic compounds (VOC) by the EPA 8260 test method.

4. Part 4-Collect Soil Samples In Four Areas Across Site For VOC And Metals Analysis:

Samples will be collected at four other individual areas across the property for analyses by the EPA 8260 test method for VOCs and by the Title 22 metals scan for hazardous waste purposes per EPA 6010. Samples will be collected (See Figure 5) at: a) The former G4 sample site; b) The former G5 sample site; c) Beneath the floor of the existing shop; and, d) Outside and in front of the shop. All four samples will be collected from a depth of approximately two feet below the ground surface. Approximate locations where these four samples will be collected are defined by a "▲" symbol outlined on Figure 6

(See Map Legend). One sample will be collected again from the former G4 and G5 sample sites because of positive analytical test results on samples collected from those areas during the November 30th, 2005 sampling program. One other sample will be collected from beneath the floor inside the shop and a second from beneath the ground surface located immediately outside this building in front of its front door located on the south side of the building. These two areas are selected because it is assumed these two locations are areas where historic dismantling operations may have occurred.

Each sample collected for analysis by the EPA 8260 will include at least two encore sample containers per sample to ensure enough material is available for two runs by the GC. Each encore sample will be at least 25 grams in size. At this time there are no intentions for collecting soil gas samples mainly due to the fact that available records describing historical uses of the property indicated there were never any gasoline or diesel storage tanks in use on the property.

3.2 Site Safety Plan

A Site Safety Plan has been prepared for the proposed scope of work outlined in this document and is included herein as Appendix B. All work described herein will be conducted according to the Site Safety Plan and will be located on-site during all field activities described below. The sign in/sign out log sheet to be use on-site is included in Appendix K.

Any work currently being performed by the property owner or his other outside contractors will be perform under their own Site Safety Plan(s) written and prepared by them for the fulfillment of their own on-site work activities.

3.3 Soil Sampling Objectives

The proposed sampling program, as outlined in Section 3.1 with sampling site sited on Figure 6, presents a number of on-site sample locations that will expand on the evaluation of the site completed to date. These locations were chosen to expand the evaluation of potentially contaminated soils in isolated locations (Figure 5 & Table 3) during the November 30, 2005 sampling event. It will also determine if soils located in other areas formerly utilized during the dismantling of vehicles also contains contaminants similar to those encountered during previous environmental sampling events, help establish background levels and trends across the property.

With consideration given to these sampling objectives the proposed program should develop a high quality database that will be representative of in-situ conditions associated with the environment located across the property. With a representative sampling program:

1. An evaluation can be made to determine whether a threat to public health, welfare and the environment exists;
2. The extent of contamination can be made to estimate the volume of contaminated soils and associated removal costs; and,
3. Documents will be generated proving attainment of clean-up goals.

3.4 Judgmental Sampling

Development of the sampling program shall be formulated, in part, on judgmental sampling concepts. Judgmental sampling is the subjective selection of sampling locations at the site, based on historical information, visual inspection, and on best professional judgment of the sampling team. We believe Part 2, 3, and 4 sampling events should fulfill this objective. This approach was already used to identify contaminants present in areas likely to have the highest concentrations and does not have any randomization associated with the sampling strategy.

3.5 Random Sampling

Random sampling is the arbitrary collection of samples within defined boundaries of the site of concern in order to establish the presence/absence and natural trends of certain chemical of interest. We understand random sampling to be the selection of sampling site without environmental biases. The selection of the seven sampling sites where background concentrations for metals will be assessed was made with this methodology to establish the concentrations of metals occurring in near surface soils at those locations. These locations were chosen because: 1) They are where future home sites are proposed; 2) Because of a request by NCDEH to sample soils in future home site areas and analyze them for metal concentrations; and, 3) Because these locations were selected with no environmental biases or subjective selection based on historical information, visual inspection, or best professional judgment.

3.6 Sample Locations

Sampling locations utilized in the November 30, 2005 event were chosen because of information outlined in the DTSC sampling report included herein as Appendix C, and information provided to the current owner of the property by Mr. Neil Peterson the previous owner (Section 2.4). With information acquired from these two sources and observations made when on site with DTSC and the owner the sampling program proposed herein was formulated. Sample locations for the future event are outlined on Figure 6 and were formulated to establish naturally occurring background concentrations in near surface soils, metal concentrations in sediments migrating down the creek within its channel and in certain areas where previous dismantling activities may have impacted near surface soils. In areas where past soil sampling has located organic contaminants in soils the sampling program will further define the extent of contamination in those areas. In addition, sampling will be performed in and around the shop where dismantling activities may have impacted surface soils.

3.7 Laboratory Analysis

As indicated on Figure 6, a total of eighteen soil samples will be collected at locations shown on that figure. Once collected and prepared, all eighteen samples will be transported to Sequoia Analytical Laboratory in Sacramento, California and analyzed utilizing the Title 22 scan with EPA 6010 test method. As indicated above in Section 3.1, two other samples will be collected

and analyzed for waste oil and diesel range organics by the EPA 8015 modified test method, and five samples will be collected and analyzed for volatile organic compounds (VOCs) by the EPA 8260 test method.

The type of suspected on-site chemical products possibly located at each sampling site, their possible hazardous ingredients and proposed EPA analytical test method(s) we recommend for use by the laboratory for future testing are presented herein in Table 4. With use of this table, additional sampling information is contained on Figures 5 & 6, and rational utilized to select analytical laboratory test methods on future samples is also presented in Table 4. Further rational for selection of the above testing methods for used on future soil samples is outlined on Table 2 of the October 20, 2005 workplan included herein as Appendix H.

Included herein as Appendix J is an "Analytical Services Quotation" and laboratory QA/QC data provided To GeoSolutions by Sequoia Analytical Laboratory, the selected analytical laboratory. This table lists the MDLs and expected reporting limits that will be provided by the laboratory during their analysis on the soil samples to be collected as outlined in Section 3.1, herein. This information is provided for test methods that will be utilized to detect Title 22 metals, TPH-Diesel/Motor Oil and VOCs in soils. It appears these limits will be acceptable to the expectations of DTSC and meet this agency's approval for use during preparations of future documents while under its direction.

3.8 Permitting And Project Contacts

There are no expected permit fees needed for the performance of the scope of work outline herein. However, the primary agency involved with approval/oversight during implementation of environmental work described in this workplan is the DTSC. All relevant data will be copied to the Nevada County Department of Environmental Health. The following Points of Contact that may be used during performance of work described herein are the:

1. Property Owner, Paul Platner (530) 277-7251;
2. DTSC representative, Eric Wallberg (916) 591-8057;
3. NCDEH representative, Grant Eisen (530) 265-1469; and,
1. GeoSolutions, Thomas Knoch (530) 274-1230.

Additional POCs are found in the Site Safety Plan for emergency purposes.

4.0 SELECTING EQUIPMENT

4.1 Analytical Screening Equipment

The sampling program outlined in Section 3.1, was structured and organized with use of all historic information related to the site and with assistance from the DTSC. The selection of sampling sites was made with reference to all documents outlined herein listed in Section 11.0 titled References and observations made with a DTSC representative during a site walk over the property on February 14th, 2006.

Based on available information outlined herein and advisement by the DTSC during design of the sampling program, it was decided analytical screening equipment will not be needed at this time. Now, specific areas will be sampled at specific sampling sites based on data acquired during the performance of previous environmental work.

4.2 Soil Sampling Equipment

Collection of soil samples will be achieved by utilizing a hand sampler consisting of a slide hammer attached to a 2 inch inside diameter sampling shoe. This shoe shall be driven into the soil to collect undisturbed soil samples from the underground environment. The sampling shoe is constructed to house replaceable 2 inch diameter brass liners 6 inches long. As the shoe is driven into subsurface soils materials located within the limits of the brass liners will be cut off from their environment as the shoe and liner are driven downward and around/over those materials. As a result the soils once beneath the mouth of the shoe become contained in the shoe and liner as they are driven downward. After the shoe and liner are pulled out the contained undisturbed soil sample shall be prepared for transport to the analytical laboratory, per SOP 2 in Appendix A.

For samples taken for motor oil or diesel range organic analyses or metal analyses, their preparation for transport will first include the placing of a teflon sheet over each end of the brass liner and then capping both ends with tight fitting plastic end caps. Each end cap will then be taped shut with scotch packaging tape. Samples collected for eventual VOC analyses will first be collected by the same type of sampling device consisting of slide hammer, sampling shoe and brass liner. Then the undisturbed soil sample contained in the brass liner will be sampled with a 25 gram En Core Sampler. These two smaller sampling devices will then be readied for transport by replacing them in their envelope, sealing the container (envelope) per its instructions, labeling the sample container according the protocol outlined herein and transported to the laboratory per SOP 2 in Appendix A.

Soil samples to be analyzed for non-volatile organics and metals will be collected within the top six to nine inches of the soil profile. To perform this sampling event the top few inches of soils

located at the ground surface will be scraped to exposed fresh soils free of surface and plant debris. Then the sampling shoe will be driven down into the freshly exposed soil. Samples to be analyzed for VOCs will be retrieved from depths starting around 24 inches below the ground surface. *Presently, there are no plans to utilize in field monitoring device(s) because of the following reasons: 1) Historical uses and records give no indication of fuel spills/storage on the property; 2) Potential areas of impact are likely (per available information) limited to areas located beneath former drums/containers thus targeting high probability areas for sampling; 3) Any spills would likely be very low in volume and limited in extent; 4) Volatile characteristics of VOCs (ability to "off gas") is high therefore limiting residual time of their exposure on the ground surface as a result of a spill; 5) Since decades have pasted since dismantling operations have ceased, abundant time has elapsed to allow for advanced levels of bio-degradation of any residual VOCs that didn't evaporate into the atmosphere; and 6) High risk areas already targeted for future sampling (Outlined in this workplan) are in response to historic uses of the property and previous sampling programs conducted by GeoSolutions and DTSC.* To expose materials for sampling at a depth of 24 inches an on-site backhoe tractor will be utilized to remove the upper two feet of overburden located directly over the selected materials for sampling. After the backhoe has dug to that depth the sampler will be used to collect the sample that will then be prepared for transport the analytical laboratory.

5.0 SOIL SAMPLE PREPARATION

5.1 Sampling Equipment Decontamination Procedures

Prior to performing the soil sampling program described herein a wash station will be set up at a centralized location on the property. This wash station will consist of a shallow washing basin in which sampling equipment will be washed within a clean five gallon bucket containing water and Liquinox. Physical washing of the equipment will be performed with a bristle brush. Once the sampling equipment is washed in the first bucket it will be double rinsed in two buckets each containing clean de-ionized water. Each time after the sampling equipment is washed and double rinsed in de-ionized water the cleaning fluid will be poured into a 55 gallon water drum. The first wash fluids containing water and Liquinox will be containerized in a 55- gallon drum labeled "Primary Wash Water". The double rinse water will be containerized in a second 55-gallon drum labeled "Rinse Water". Also, any water accumulated in the shallow washing basin will also be containerized in the first 55-gallon "Primary Wash Water" drum. If heavy hydrocarbons are encountered during a sampling event the equipment will be first washed with a brush in a container containing water with Hexane, then washed as stated above. A third labeled container will be on site if in the event it is needed to store solutions of Hexane with heavy hydrocarbons.

After the sampling event the three storage drums will be labeled and then temporary stored in a safe location on the subject site. Disposal of their contents will not be initiated until after analytical test results on soil samples are returned from the laboratory. Upon receipt of those results an appropriate protocol will be initiated to property dispose of those contents. If

contaminants are encountered in soil samples by analytical laboratory testing the contents of the drums will then be sampled and analyzed per appropriate disposal procedures for the type of contaminates encountered during initial laboratory analyses. If contaminates are not encountered in soil samples the contents of those drums will then be disposed of at an appropriate on-site location.

5.2 Final Preparation

Sample containers have been selected based on compatibility with materials being sampled, resistance of breakage, appropriate protocol required per analytical test method, and required volume needed by the laboratory for analysis. Samples to be analyzed by EPA 8015M test method and the Title 22 scan for metals with EPA 6010 test method will be collected in two inch diameter brass liners six inches long. Those containers filled with soils to be analyzed for metals and motor oil and diesel range organics shall have their ends covered by teflon sheeting, capped by plastic end cap, and tapped. Soil samples to be analyzed by the EPA 8260 test method shall first be retrieved in brass liners driven into native in-bank soils. Then, once the sample container is withdrawn from in-situ a portion of it will be collected into a 25 gram sized En-Core acetate sleeves by driving them into the retrieved soil. Then they will be repackaged in their original packets for transport to the laboratory. To help ensure the integrity of all samples after their delivery to the laboratory, appropriate arrangements shall be made to make the laboratory sample preparation procedures part of the entire laboratory bid contract.

Each sample will be identified on a Chain-of-Custody form like that included herein as Figure 8. These forms will be placed in the cool ice-chest with the samples and transported along with the samples to the analytical laboratory. After all samples are collected, labeled, inventoried onto the Chain-of-Custody form(s), and placed into the ice-chest for transport the ice-chest shall be taped closed. Then the Chain-of-Custody forms shall be taped to the top of the ice-chest that will then be transported the next day in the consultant's company vehicle by the consultant to the analytical laboratory located in Sacramento, CA. Consultant will be in control of samples over night during their presence in his possession.

To establish control over the accountability of samples once they are collected, each will be labeled similar to the label displayed on Figure 9. The same type of information on that label will be provided for each sample. Numbering of samples will continue to follow the trend utilized during the first sampling event conducted to evaluated the economic viability of the property. That first sampling event started labeling samples at G1 and finished with a G10 sample. It is proposed to start labeling the 18 soil samples to be collected under guidance of this workplan with a G11 sample name designator. As sample collection continues, their identifying numbers will continue to increase through to the completion of the sampling program. This process will be continued during preparation of duplicate and trip blank samples.

All soil samples to be analyzed for organic analyses shall be kept at a temperature of 4 degrees centigrade. Final considerations and preparations for collecting soil samples involving their volumes, appropriate containers and holding times was with reference to the QA/QC Guidance

For Removal Activities (U.S. EPA, April 1990), and in the Compendium of ERT Soil Sampling and Surface Geophysics (U.S. EPA, January 1991).

6.0 QUALITY ASSURANCE AND QUALITLY CONTROL

6.1 Data Categories

The EPA has established a process of data quality objectives to ensure the precision, accuracy and representativeness, and quality of environmental data is appropriate for their intended application. Data Quality Objective guidance is defined with two broad categories of analytical data: a) Screening; and, b) Definitive.

Screening data are generated by rapid, less precise methods of analysis with less rigorous sample preparation. Definitive data are generated using rigorous analytical methods like approved EPA reference methods. These data are analyte specific, with confirmation of analyte identity and concentration. Definitive data is generated with tangible raw data (ie. Chromatograms, spectra, digital values) in the form of print outs or computer generated electronic files. For this sampling program definitive data will be used.

6.2 Sources Of Errors

Identifying and quantifying error or variation in sampling and laboratory analysis can be difficult, but it is important to understand their sources to limit their effects. There are four primary sources of error: a) Sampling Design; b) Sampling Methodology; c) Sample Heterogeneity; and, d) Analytical Procedures.

Sampling design deals with site variations including variations in types and in concentration levels of contaminants throughout the site. Representative sampling should accurately identify and define this variation. However, error can be introduced by the selection of a sampling design that misses site variation. For example a sampling grid with relatively large distances between random sampling points or a biased sampling approach (ie. Judgmental Sampling) may allow significant contaminate trends to go unidentified. Therefore, for this sampling program the seven random sampling sites were selected in the areas or sites of the property where most of the previous activities were performed and also in areas where future home site have been selected. Therefore these sites will most likely provide findings that are representative of actual site conditions and also provide evaluation of existing conditions where future residential structures will be constructed.

Error can be introduced by the *Sampling Methodology* and handling procedures. They can develop as cross-contamination from inappropriate use of sample collection equipment, unclean sample containers, improper sampling equipment decontamination and shipment procedures and other factors. In response to these potential problems the sampling program shall utilize standardized procedures for collecting, handling, and shipping samples. These protocols will limit error associated with sampling methodology. The use of Standard Operating Procedures outlined in Appendix A and procedures outlined above in Sections 5.1 and 5.2 will help ensure that all sampling tasks will be performed in the same manner, regardless of the individual

sampling team, date, or location of the sampling activity. Trip blanks and field duplicates shall be used to identify error due to sampling methodologies and sample handling procedures.

Sample heterogeneity is a potential source of error because unlike water, soil is rarely a homogeneous medium and it exhibits variable properties with lateral distance and depth. This heterogeneity may also be present in the sample container unless the sample was homogenized in the field or in the laboratory. The laboratory uses only a small aliquot of the sample for analysis; if the sample is not properly homogenized, the analysis may not be truly representative of the sample and of the corresponding site. Thoroughly homogenizing samples, therefore, can limit error associated with sample heterogeneity. These issues will be discussed with the analytical laboratory's project manager at time of submittal of samples to ensure the samples are property homogenized and representative of the site.

Errors that may originate in *analytical procedures* include cross-contamination, inefficient extraction, and inappropriate methodology. Matrix spike samples, replicate samples, performance evaluation samples, and associated quality assurance evaluation of recovery, precision, and bias, shall be used by the analytical laboratory to distinguish any analytical errors from errors introduced during sampling activities. Laboratory QA/QC procedures are included in Appendix J.

6.3 QA/QC Samples

QA/QC samples shall be collected in the field and prepared for/by the laboratory. They will be analyzed in addition to field samples and provide information on the variability and usability of the results and utilized to assist in identifying the origin of analytical discrepancies to help determine how the analytical results should be used. Their most important use will be to validate analytical results. *Although for this project we propose to utilize three field replicate samples (one duplicate sample for each of the three analytical methods to be used),seven background samples, three rinsate blank samples, and one trip blank as field QA/QC samples, other types listed below are available for use if determined at a later time they are needed.* Performance evaluation, matrix spike, and matrix spike duplicate samples prepared by the laboratory shall also provide additional measures of control for the data generated. Amount of which analytical laboratory QA/QC procedures will be implemented for this project are listed in Appendix J.

QA/QC results shall be utilized, when needed, to modify sampling collection, preparation, handling or analytical procedures if the resultant data do not meet site-specific quality assurance objectives. The following paragraphs briefly describe each type of available QA/QC sample:

1. Field replicates are field samples obtained from on location, homogenized, divided into separate containers and treated as separate samples throughout the remaining sample handling and analytical processes. These samples are used to assess error associated with sample heterogeneity, sample methodology and analytical procedures. Their use is valuable when determining total error for critical samples with contamination concentrations near the action level. To be sure, for statistical analysis to be valid in such cases, a minimum of one

replicate sample will be prepared and utilized for each of the three analytical test methods to be utilized;

2. Collocated samples are collected adjacent to the routine field sample to determine local variability of the soil and contamination at the site. Typically, collocated samples are taken about 1 ½ to 3 feet away from the selected sample location. Analytical results from collocated samples can be used to assess site variation, but only in the immediate sampling area. Due to the non-homogeneous nature of soil at sites, collocated samples shall not be used to assess variability across a site and will not be utilized for assessing error on this project unless directed to do so by the DTSC;

3. Background samples shall be collected upgradient of the area(s) of contamination where there is little or no chance of migration of contaminates of concern. Background samples determine the natural composition of the soil (especially important in areas with high concentrations of naturally occurring metals) and are considered "clean" samples. They provide a basis for comparison of concentrations with samples collected on the subject site. Seven background samples will be collected; however, more shall be warranted if and when site-specific factors such as natural variability of local soil, multiple on-site contaminant source areas, and presence of off-site facilities potentially contributing to soil contamination are located. Background samples may be collected for all QA objectives in order to evaluate potential error associated with sampling design, sampling methodology, and analytical procedures.

4. Rinsate blanks are samples obtained by running analyte-free water over decontaminated sampling equipment to test for residual contamination. The blank is placed in sample containers for handling, shipment, and analysis identical to the samples collected that day. A rinsate blank is used to assess cross-contamination brought about by improper decontamination procedures. Where dedicated sampling equipment is not utilized a rinsate blank is usually collected, per type of sampling device, per day. For this site, during the proposed sampling program one rinsate blank water sample shall be collected during the second rinse of sampling equipment with de-ionized water. This one rinsate blank water sample will be collected during the washing of sampling equipment after collection of one soil samples to analyzed for VOCs, metals, and motor oil/diesel range organics. As the water is rinsed over the surface of the sampling device it will be allowed to completely fill a 40-milliliter vial for VOC analysis and a one liter bottle for analysis for motor oil/diesel range organics. This container will then be labeled with procedures outlined above and placed in the cool ice-chest for transport to the analytical laboratory for analysis.

5. Performance evaluation samples evaluate the overall bias of the analytical laboratory and detect any error in the analytical method used. These samples are usually prepared by a third party, using a quantity of analyte(s) which is known to the preparer but unknown to the laboratory, and always undergo certification analysis. The analyte(s) used to prepare the performance evaluation samples is the same as the analyte(s) of concern. Laboratory procedural error is evaluated by the percentage of analyte identified in the performance

evaluation sample (percent recovery). Even though they are not available for every single analyte, analysis of performance evaluation samples is required to obtain definitive data. Although these samples could be utilized, at this time, there are no intentions to collect a performance evaluation sample(s) nor will there be unless directed to do so by the DTSC.

6. Matrix spike and matrix spike duplicate samples (MS/MSDs) are environmental samples that are spiked in the laboratory with a known concentration of a target analyte(s) to verify percent recoveries. MS/MSDs are primarily used to check sample matrix interference. They can also be used to monitor laboratory performance. However, a data set of at least three or more results is necessary to distinguish between laboratory performance and matrix interference. Performance of this QA/QC measure will be left to the discretion of the analytical laboratory per their intentions included in Appendix J.

   MS/MSDs can also monitor method performance. Again, a data set is helpful to assess whether a method is performing properly. Generally, interference and poor method performance go together.

   MS/MSDs can also evaluate error due to laboratory bias and precision (when four or more pairs are analyzed). Analyzed one MS/MSD pair to assess bias for every 20 soil samples. Use the average percent recovery for the pair. To assess precision the laboratory may analyze at least 8 matrix spike replicates from the same sample, determine the standard deviation and the coefficient of variation. See pages 9-10 of the *QA/QC Guidance For Removal Activities* (U.S. EPA, April, 1990) for procedures on calculating analytical error. MS/MSDs are optional when the goal is to obtain screening data but required to acquire definitive data as one of several methods to determine analytical error.

7. Field blanks are samples prepared in the field using certified clean sand or soil and are then submitted to the laboratory for analysis. A field blank is used to evaluate contamination error associated with sampling methodology and laboratory procedures. If available, the submittal of field blanks is performed at a rate of one per day. Until trends in data may indicate the need for use of certified field blanks non are currently proposed for use on this project unless directed to do so by the DTSC.

8. Trip blanks are samples prepared prior to going into the field if they consist of certified clean sand or soil and are handled, transported, and analyzed in the same manner as the other volatile organic samples acquired that day. Trip blanks are used to evaluate error associated with sampling methodology and analytical procedures by determining if any contamination was introduced into samples during sampling, sampling handling and shipment, and /or during laboratory handling and analysis. "For this project one trip blank sample will be prepared using de-ionized water in a 40 milliliter vial for volatile organic analyses.

7.0 DATA ANALYSIS & PREPARATION

7.1 Data Interpretation Methods

Methods of data interpretation will depend on project-specific considerations, such as the number of sampling locations and their range in values of contaminates, if encountered. A sampling site depicting extremely low concentrations of contaminants with significantly higher values from neighboring hot spots, with little or no concentration gradient in-between, does not lend itself to contouring and geostatistics, specifically the development of variograms. However, data posting on a site map would be useful at a site as this to illustrate hot spots and clean areas.

Based on available information elevated concentrations of contaminates will most likely be found in areas where dismantling operations were performed and/or at locations where containers stored residual vehicular fluids generated by those former dismantling operations. The sampling program outlined herein is designed to target the placement of sampling sites in these high probability areas. Exact placement of each sampling location will ultimately be determined in the field based on physical observations of the ground exposed at the surface in those high probability areas.

Spacial control over exact placement of each sampling site within each high probability area will be established during the sampling program. Then, if elevated levels of chemicals of concern become apparent, via laboratory analyses, the associated area(s) will then be further assessed if needed during additional sampling or, if decided, during follow-on remedial operations. This additional sampling will be designed with lateral and vertical spread of sampling sites to evaluate the three dimensional distribution of contaminants in subsurface materials. The same methodology will be utilized for any background/stream sediment samples that encounter elevated levels of contaminants.

7.2 Sampling Personnel & Responsibilities

All sampling work described in this document is to be performed by Thomas Knoch, a representative of GeoSolutions and these activities will be observed by Eric Wallberg of the DTSC. When digging with backhoe to remove near surface soils before collecting VOC soil samples is needed this work is to be performed by Paul Platner. Before each sampling Mr. Knoch will wash the sampling equipment to prevent any potential for cross contamination between sampling events. Site safety officers and their responsibilities are outlined in the Site Safety Plan included herein as Appendix B.

8.0 SCHEDULE

The work schedule outlined herein can start within 10 working days upon approval by DTSC. All project contact personnel will be given at least a one-week notice of when field operations will commence. This information will also be presented to the NCDEH. Analysis to be performed by Sequoia Analytical Laboratory will be scheduled utilizing the laboratory's standard turn around time, typically 21 days. Once field work is complete and maps have been generated and analytical laboratory test results have been received, it will take approximately 30 business days to generate the assessment report.

9. REPORTING

Upon completion of field work outlined herein and receipt of analytical laboratory test results, the consultant shall prepare a Preliminary Endangerment Assessment report, per DTSC guidance manual. As already mentioned this work will take approximately 30 business days to complete. This document will also outline field activities performed during completion of work outlined in this workplan. It will also present copies of the analytical laboratory test results reports and their chain-of-custody forms, maps showing where soil samples were collected and present a developed professional opinion of the environmental status of the subject site based on all information acquired. The PEA will provide basic information for determining if there has been a release of a hazardous substance that can present a risk to human health or the environment. If results of that assessment indicate a release has taken place an estimate of the potential threat to public health and/or the environment posed by the site shall be made.

Section 2.5 (Human Health Screening Evaluation) and Section 2.6 (Ecological Screening Evaluation) of the DTSC Preliminary Endangerment Assessment (PEA) Guidance Manual (1994) outlines procedures to use to characterize the risk and associated hazard to human health and a qualitative summary for an ecological screening evaluation. Once sample results are received from the analytical laboratory an appropriate application of those procedures outlined in Chapter 2 of the PEA will be implemented. Then results of that work will be presented in a final report per guidance contained in Chapter 3 of the Guidance Manual. If positive analytical laboratory test results are obtained for metals, motor oil/diesel range organics or VOCs, a separate map showing sample location(s) and concentration(s) will be presented to clearly show trends in concentrations of those chemicals of concern on the property.

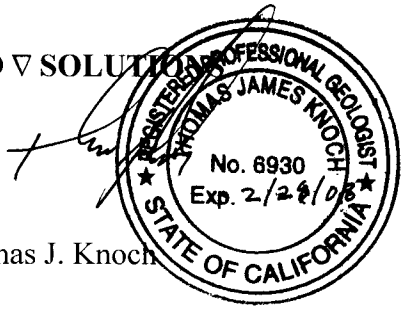
During field operations a daily site activity log will be developed with a photographic journal documenting sampling activities and made available for future review by their inclusion into an appropriate section of the PEA. Detailed descriptions of sampling areas at the time and location where every sample was collected will be included with the daily site activity logs. A generalized soils description for each sampling site will be included in the daily site activity log, but for soil samples collected from a depth of 2 feet below the existing ground surface a soil profile log will also be provided. Examples of the daily site activity log, soil profile log and photo log are included herein as Appendix K.

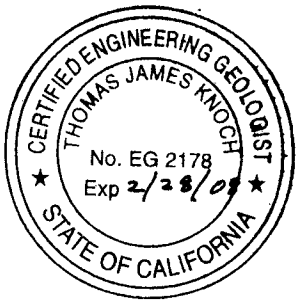
10.0 REMARKS/SIGNATURES

The information contained within this report reflects the professional opinion of the Consultant at this time and was developed in accordance with currently available information and accepted environmental and geologic practices at this time and for this site. This report has been prepared solely for the use of Mr. Paul Platner and associated regulatory agencies providing environmental oversight including but not limited to the Department of Toxic Substances Control, California Central Valley Regional Water Quality Control Board and County of Nevada Department of Environmental Health. Any reliance on this report by parties other than those above shall be at such parties' sole risk.

The work description provided in this workplan was completed under the direct supervision of the Professional Geologist, Engineering Geologist, Hydrogeologist and Environmental Assessor registered with the State of California, whose signature appears below.

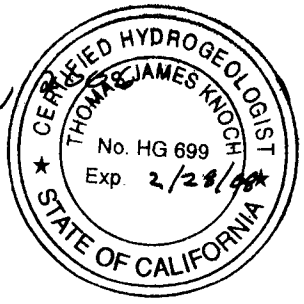
GEO ▽ SOLUTIONS





Thomas J. Knoch

Date May 11, 2006



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TABLES

TABLE 1
PREVIOUS ANALYTICAL LABORATORY TEST
RESULTS ON SAMPLES COLLECTED BY STATE AGENCY(S)

SAMPLE NO. & DESCRIPTION	LOCATION	LABORATORY RESULTS	HAZARDOUS WASTE LEVEL
AI0724-1 White Crystal	South in North Road	Not Hazardous	
AI0724-2 White Crystal in Drum	South of North Road	Not Hazardous	
AI0724-3 White Sludge in Drum	South of North Road	Not Hazardous	
AI0724-4 Light Brown Oil	Next to abandoned trailer	130 degrees F.	>140 degrees F.
AI0724-5 Clear liquid w/ sediment	Next to motor home	Not Hazardous	
AI0724-6 Used Oil	On top of hill	Lead-194 mg/l (STLC)	Lead-5.0 mg/l (STLC)
AI0724-7 Used Oil	On top of hill	Lead-14.2 mg/l (STLC)	Lead-5.0 mg/l (STLC)
AI0724-8 Light Brown grease	South part of property	Barium-2320 mg/l (STLC)	Barium-100 mg/l (STLC)
AI0724-9 Clear liquid	Front of Motor home	Not Hazardous	
AI0724-10 Clear liquid	Top of American Hill Road	Not Hazardous	
AI0724-11 Black liquid	Next to abandoned motor home	Not Hazardous	

Note: This table is reproduced from the table presented by Mr. Alan K. Ito of DTSC in his Sampling Report, dated September 15, 2003 (Appendix C), and again we believe is in his letter dated February 9th, 2003 (04?) included herein as Reference 17. For additional information relating to the above table, please see those references also included in this document. Because this information was initially produced by the DTSC it may be located in relevant files at that agency. Consultant can not interpret intentions or opinions of the author of above documents or fill in data gaps generated by him during development of those documents. Some copies of this data are poor reproductions and would require interpretation by the Consultant who is not prepared to perform. But do please see documents made available herein as Appendix C or Reference 17 in Appendix G or review DTSC files.

TABLE 2

TYPE OF SUSPECTED CHEMICAL(S) ONCE STORED ACROSS THE SITE AND THEIR ASSOCIATED HAZARDOUS INGREDIENTS

ENVIRONMENTAL PARAMETER		
CHEMICAL PRODUCT	HAZARDOUS INGREDIENTS	ANALYTICAL TEST METHOD
Automobile Batteries	Pb & Corrosivity	Title 22 metals scan with EPA 6010 test method
Waste Oil	Petroleum Hydrocarbons, Cd., Cr., Pb., Ni., Zn.	EPA 8015M For Motor Oil & Diesel Range Organics Title 22 metals scan with EPA 6010 test method
Paints	See Footnotes	EPA 8260 For Halogenated VOCs
Vehicle Fuel Tank	Petroleum Hydrocarbons, Pb, VOCs	EPA 8015M For Motor Oil & Diesel Range Organics Title 22 metals scan with EPA 6010 test method EPA 8260 For Halogenated VOCs

Footnotes:

1. Enamel or oil based points contain pigments, ethylene, aliphatic hydrocarbons, and mineral spirits;
2. Latex or water based paint contain resins, glycol ethers, esters, pigments, phenyl mercuric acetate;
3. Rust paints contain methylene chloride, petroleum distillates and toluene;
4. Thinners and turpentine contain n-butly alcohol, acetone, methyl isobutyl ketone, and petroleum distillates;
5. Furniture strippers contain acetone, methyl ethyl ketone, alcohols, xylene, toluene and methylene chloride;
6. Wood preservatives contain chlorinated phenols, (ie. PCP), copper or zinc, naphthenate, creosote and magnesium fuluorosilicate; and,
7. Stains/finishes contain mineral spirits, glycol ethers, ketones, halogenated hydrocarbons and naphtha.

For complete list of appropriate analytical testing methods please see Table 4 listed below.

TABLE 3
1st of 5
ANALYTICAL LABORATORY TEST RESULTS
ON SAMPLES COLLECTED NOVEMBER 30TH, 2005

	EPA 8015B ANALYTICAL TEST METHOD		
Sample No.	**Compound**	**Detection Limit (mg/Kg)**	**Results (mg/Kg)**
Composite G1+G2	Diesel Range Organics	2.0	25.0
	Motor Oil Range Organics	4.0	68
	Un I.D. Extractable Hydrocarbons	4.0	110.0
G4 Surface	Diesel Range Organics	2.0	250.0
	Motor Oil Range Organics	4.0	250.0
	Un I.D. Extractable Hydrocarbons	4.0	250.0
G4 @ 1 ½ Feet	Diesel Range Organics	2.0	110.0
	Motor Oil Range Organics	4.0	89.0
	Un I.D. Extractable Hydrocarbons	4.0	130.0
G5	Diesel Range Organics	2.0	280.0
	Motor Oil Range Organics	4.0	330.0
	Un I.D. Extractable Hydrocarbons	4.0	380.0
G6	Diesel Range Organics	2.0	9.7
	Motor Oil Range Organics	4.0	12.0
	Un I.D. Extractable Hydrocarbons	4.0	21.0
G7	Diesel Range Organics	2.0	560.0
	Motor Oil Range Organics	4.0	580.0
	Un I.D. Extractable Hydrocarbons	4.0	600.0
G8	Diesel Range Organics	2.0	130.0
	Motor Oil Range Organics	4.0	230.0
	Un I.D. Extractable Hydrocarbons	4.0	280.0
G9	Diesel Range Organics	2.0	23.0
	Motor Oil Range Organics	4.0	48.0
	Un I.D. Extractable Hydrocarbons	4.0	75.0
G10	Diesel Range Organics	2.0	35.0
	Motor Oil Range Organics	4.0	54.0
	Un I.D. Extractable Hydrocarbons	4.0	72.0

TABLE 3
(Continued-2nd of 5)
ANALYTICAL LABORATORY TEST RESULTS
ON SAMPLES COLLECTED NOVEMBER 30TH, 2005

SAMPLE NO.	EPA 8082 ANALYTICAL TEST METHOD		
	Compound	Detection Limit (ug/Kg)	Results (ug/Kg)
Composite G1+G2	PCBs	100.0	Non Detect
G4 Surface	PCBs	100.0	Non Detect
G4 @ 1 ½ Feet	PCBs	100.0	Non Detect
G5	PCBs	100.0	Non Detect
G6	PCBs	100.0	Non Detect
G7	PCBs	100.0	Non Detect
G8	PCBs	100.0	Non Detect
G9	PCBs	100.0	Non Detect
G10	PCBs	100.0	Non Detect

TABLE 3
(Continued-3rd of 5)
ANALYTICAL LABORATORY TEST RESULTS
ON SAMPLES COLLECTED NOVEMBER 30TH, 2005

SAMPLE NO.	EPA 6000/7000 (Metals) ANALYTICAL TEST METHOD		
	Compound	Detection Limit (mg/Kg)	Results (mg/Kg)
Composite G1+G2	Cu.	2.0	16.0
	Hg.	0.020	0.45
	Mg.	10.0	2,700.0
	Zn.	10.0	58.0
G4 Surface	Cd.	1.0	Non Detect
	Cr.	1.0	5.4
	Pb.	5.0	5.2
	Ni.	2.0	3.5
	Zn.	1.0	23.0
G4 @ 1 ½ Feet	Cd.	1.0	Non Detect
	Cr.	1.0	4.6
	Pb.	5.0	Non Detect
	Ni.	2.0	6.5
	Zn.	1.0	27.0
G5	Cd.	1.0	Non Detect
	Cr.	1.0	6.5
	Pb.	5.0	Non Detect
	Ni.	2.0	7.7
	Zn.	1.0	21.0
G6	Cd.	1.0	Non Detect
	Cr.	1.0	8.8
	Pb.	5.0	Non Detect
	Ni.	2.0	7.3
	Zn.	1.0	26.0
G7	Cd.	1.0	Non Detect
	Cr.	1.0	13.0
	Pb.	5.0	**160.0**
	Ni.	2.0	9.7
	Zn.	1.0	92.0
G8	Cd.	1.0	Non Detect
	Cr.	1.0	5.6
	Pb.	5.0	14.0
	Ni.	2.0	5.9
	Zn.	1.0	79.0
G9	Cu.	2.0	15.0
	Hg.	0.020	0.32
	Mg.	10.0	2,100.0
	Zn.	10.0	87.0
G10	Cd.	1.0	Non Detect
	Cr.	1.0	5.9
	Pb.	5.0	60.0
	Ni.	2.0	5.6
	Zn.	1.0	400.0

TABLE 3
(Continued-4th of 5)
ANALYTICAL LABORATORY TEST RESULTS
ON SAMPLES COLLECTED NOVEMBER 30TH, 2005

SAMPLE NO.	TENTATIVELY I.D. COMPOUNDS By GC/MS (EPA 8260)		
	Compound	Detection Limit (ug/Kg)	Results (ug/Kg)
Composite G1+G2	No TIC Found	5000.0	Non Detect
G4 Surface	See Test Results Appendix D And Summarized In Table 5		
G4 @ 1 ½ Feet	See Test Results Appendix D And Summarized In Table 6	None Reported	
G5	See Test Results Appendix D An Summarized In Table 7	None Reported	
G6	No TIC Found	5000.0	Non Detect
G7	No TIC Found	5000.0	Non Detect
G8	No TIC Found	5000.0	Non Detect
G9	No TIC Found	5000.0	Non Detect
G10	No TIC Found	5000.0	Non Detect

TABLE 3
(Continued-5th of 5)
ANALYTICAL LABORATORY TEST RESULTS
ON SAMPLES COLLECTED NOVEMBER 30TH, 2005

SAMPLE NO.	EPA 8260B ANALYTICAL TEST METHOD		
	Compound	Detection Limit (ug/Kg)	Results (ug/Kg)
Composite G1+G2			
G4 Surface	Naphthalene	25.0	390.0
	Styrene	25.0	540.0
	Toluene	25.0	1,100.0
	1,2,4-Trimethylbenzene	5,000.0	74,000.0
	1,3,5-Trimethylbenzene	5,000.0	23,000.0
	Xylenes	5,000.0	58,000.0
G4 @ 1 ½ Feet	n-Butylbenzene	5.0	9.1
G5	1,3,5- Trimethylbenzene	5.0	5.3
G6			Non Detect
G7			Non Detect
G8			Non Detect
G9			Non Detect
G10			Non Detect

TABLE 4
SUSPECTED ON-SITE CHEMICAL PRODUCTS AT EACH SAMPLING SITE, THEIR PROBABLE HAZARDOUS INGREDIENTS AND RECOMMEND EPA ANALYTICAL LABORATORY TEST MEHTODS

On-Site Sample Location (See Figure 6)	ENVIRONMENTAL PARAMETER		
	Possible Chemical Product	Possible Hazardous Ingredient	EPA Analytical Lab Test Method
All Seven Background Sampling Sites	No Expected Outcome Of Analytical Laboratory Test Results Uncertain	Unknown	Title 22 metals scan for hazardous waste purposes with EPA 6010 test method
Two Stream Sediment Sampling Sites	No Expected Outcome Of Analytical Laboratory Test Results Uncertain	Unknown	Title 22 metals scan for hazardous waste purposes with EPA 6010 test method
5 Background Sample Sites In Former G7 Sample Area (See Figures 5 & 6)	Possibly Automobile Batteries or Waste Oil	Lead	Title 22 metals scan for hazardous waste purposes with EPA 6010 test method
Former G4 & G5 Sample Sites Plus Soils Under Shop Floor & Soils Under Shop Entry Area	Possibly Automobile Batteries or Waste Oil	Unknown But Possibly Metals	Title 22 metals scan for hazardous waste purposes with EPA 6010 test method
Two Samples In Former G7 Sample Area (Figures 5 & 6)	Waste Oil	Unknown But Possibly Motor Oil & Diesel Range Organics	EPA 8015M For Motor Oil & Diesel Range Organics
One Sample In Former G7 Sample Area (Figures 5 & 6)	Unknown	Unknown But Possibly VOCs	EPA 8260 For Halogenated VOCs
Former G4 & G5 Sample Sites Plus Soils Under Shop Floor & Soils Under Shop Entry Area (See Figures 5 & 6)	Possibly Automobile Batteries or Waste Oil And Gasoline	Possibly VOCs Per Analytical Test Results Included In Table 3 And Analytical Test Reports In Appendix D	EPA 8260 For Halogenated VOCs

Note: See Appendix J for MDLs, reporting limits and laboratory QA/QC

TABLE 5
EPA 8260 (TID Compounds by GC/MS)
TEST RESULTS ON SOIL SAMPLE G4 SURFACE

COMPOUND	RESULTS (ug/kg)	REPORTING LIMIT (ug/kg)
2,3-Dihydro-1-methylindene	2,300	None Stated
Decane, 3.3.4-trimethyl	1,400	None Stated
Benzene, 1,2,3,4-tetramethly-	ND	25,000
Benzene, 2-ethenyl-1,4-dimethy	1,200	None Stated
Benzene 1,2,3,5 tetramethyl	1,200	None Stated
2-propenoic acid, 3-(2-hydroxyphenyl	ND	25,000
2-ethyl-1.3,-dimethylbenzene	ND	25,000
Pentane, 2,3,3-trimethyl-	1,800	None Stated

Note: ND – non-detect

Information copied from Sequoia Analytical test report S512048, dated 12/27/05, 15:12, page 11 of 29. Analytical reports included as part of Appendix D.

TABLE 6
EPA 8260 (TID Compounds by GC/MS)
TEST RESULTS ON SOIL SAMPLE G4 @ 1 ½ FEET

COMPOUND	RESULTS (ug/kg)	REPORTING LIMIT (ug/kg)
1H-Indene, 2,3-dihydro-1,2-dim	16	None Stated
Benzene, 1,2,3,5-tetramethyl-	44	None Stated
1H-Indene, 1-ethyl-2,3-dihydro	17	None Stated
1H-Indene, 2,3-dihydro-1,3-dim	18	None Stated
1H-Indene, 2,3-dihydro-4,7-dim	27	None Stated
1H-Indene, 2,3-dihydro-4-methy	29	None Stated
Benzene, (1-methyl-1-propenyl)	28	None Stated
Benzene, (2-methyl-1-propenyl)	17	None Stated
1H-Indene, 2,3-dihydro-1,6-dim	24	None Stated
Benzene, 1,2,3,4-tetramethyl-	53	None Stated
Tridecane	27	None Stated
Benzene, 1,2,4,5-tetramethyl-	40	None Stated
Benzene, 1-methyl-3-(1-methyle	41	None Stated
Disiloxane, 1,1,3,3-tetramethy	20	None Stated
Benzene, methyl(1-methylethyl)	19	None Stated
Benzene, 1,1`-(1,1,2,2-tetrame	17	None Stated
Benzene, 1-methyl-4-(2-methylp	17	None Stated
Benzene, 1-ethyl-2,4,5-trimeth	60	None Stated
Benzene, 1-(1,1-dimethylethyl)	55	None Stated
Benzene, 1,3-diethyl-5-methyl-	28	None Stated

Note: ND – non-detect

Information copied from Sequoia Analytical test report S512048, dated 12/27/05, 15:12, page 11 of 29. Analytical reports are included as part of Appendix D

TABLE 7
EPA 8260 (TID Compounds by GC/MS)
TEST RESULTS ON SOIL SAMPLE G5

COMPOUND	RESULTS (ug/kg)	REPORTING LIMIT (ug/kg)
Pentadecane	14	None Stated
Naphthalene, 1,8-dimethyl-	13	None Stated
Naphthalene, 1-ethyl-	8.1	None Stated

Note: ND – non-detect

Information copied from Sequoia Analytical test report S512048, dated 12/27/05, 15:12, page 12 of 29. Analytical reports are included as part of Appendix D.

FIGURES

APPENDICES

APPENDIX A

STANDARD OPERATING PROCEDURES

GEO ∇ SOLUTIONS
STANDARD OPERATING PROCEDURES
RE: SOIL SAMPLING
SOP-2

Soil sampling shall be performed under the direction of a registered geologist. To reduce the potential for cross-contamination, excavating equipment shall be washed prior to use and between sampling events. Prior to performing the soil sampling program described herein this workplan a wash station will be set up at a centralized located on the property. This wash station will consist of a shallow washing basin in which sampling equipment will be washed within a clean five gallon bucket containing water and Liquinox with bristle brush. Physical washing of the equipment will be performed with that bristle brush. Once the sampling equipment is washed in the first bucket it will be double rinsed in two buckets each containing clean de-ionized water. Each time after the sampling equipment is washed and double rinsed the cleaning fluid will be poured into a 55 gallon water drum. The first wash fluids containing water and Liquinox will be containerized in a 55- gallon drum labeled "Primary Wash Water". The rinse water will be containerized in a second 55-gallon drum labeled "Rinse Water". Also, any water accumulated in the shallow washing basin will also be containerized in the first 55-gallon "Primary Wash Water" drum. If heavy hydrocarbons are encountered during a sampling event the equipment will be first washed with a brush in a container with water containing Hexane, then washed as stated above. A third labeled container will be standing by on site if in the event it is needed to store solutions of Hexane with heavy hydrocarbons. Also, excess loose soils generated as a result of sampling activities will be placed on plastic sheet, or if limited in volume, in plastic bags, labeled and stored on site pending results of laboratory testing. Once results are received then appropriate disposal alternative(s) will be formulated and implemented in a timely manner.

Soil samples to be submitted to the analytical laboratory for evaluation of motor oil or diesel range organics and metals will be collected in cleaned 2x6 inch brass liner. Samples to be analyzed for VOCs shall first be collected into brass liners then into 25-gram Encore containers provided by the laboratory. To reduce the potential for cross-contamination between samples, the sampling equipment shall be washed in a solution of Liquinox and doubly rinsed between each sampling event as indicated above.

Upon recovery, the soil sample will be sealed for transport to the laboratory for analysis. All samples shall be hermetically sealed, labeled and chilled on ice at approximately 40 degrees F and then delivered under strict chain-of-custody to the analytical laboratory. These procedures minimize the potential for cross-contamination and volatilization of volatile organic compounds prior to chemical analysis.

After performance of the sampling program the three storage drums will be temporary stored in a safe location on the subject site. Disposal of their contents will not be initiated until after analytical test results on soil samples are returned from the laboratory. Upon receipt of those results an appropriate protocol will be initiated at that time to dispose of contents in the drums. If contaminants are encountered in soil samples during analytical laboratory testing the contents

of the drums will then be sampled and analyzed per appropriate disposal procedures for the type of contaminates encountered during initial laboratory analyses. If contaminates are not encountered in soil samples the contents of the drums will be disposed on-site.

GEO ∇ SOLUTIONS
STANDARD OPERATING PROCEDURES
RE: SOIL CLASSIFICATION
SOP-3

Soil samples shall be classified according to the Unified Soil Classification System. Representative portions of the samples may be submitted under strict chain-of-custody to an analytical laboratory for further examination and verification of the in-field classification, and analysis of soil mechanical and chemical, and/or petrophysical properties. The soil types shall be indicated on logs of soil sampling site together with depths corresponding to the sampling points, and other pertinent information.

GEO ∇ SOLUTIONS
STANDARD OPERATING PROCEDURES
RE: SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES
SOP-4

Sample identification and chain-of-custody procedures ensure sample integrity, and document sample possession from the time of collection to its ultimate disposal. Chain-of-Custody forms (Figure 8) are used to record possession of the sample from time of collection to its arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. As already discussed Chain-of-Custody forms will accompany soil samples containerized for transportation to the analytical laboratory in a cool ice-chest. Physical transport of the ice-chest is to be performed by the consultant who will be in direct physical control of the container. Upon arrival the sample-control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s) and ensure adequate volume for analysis.

Each sample container will be labeled (Figure 9) to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, sampling methodology, name(s) of on site personnel. As already mention in Section 5.2 the future numbering system for samples will continue to follow the trend utilized during the first sampling event conducted to evaluated the economic viability of the property. That first sampling event started labeling samples with G1 and finished with a G10 sample. It is proposed to start labeling the 18 future soil samples to be collected under guidance of this workplan with a G11 sample number designator. As sample collection continues, their identifying numbers will continue to increase through to completion of the sampling program. This process will be continued during preparation of duplicate, rinsate and trip blank samples. Any other pertinent field observations will also be recorded on the daily field report or soil profile logs.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally required logbook maintained in the laboratory. The sample description, date received, client's name and any other relevant information will also be recorded.

GEO ∇ SOLUTIONS
STANDARD OPERATING PROCEDURES
RE: LABORATORY ANALYTICAL QUALITY ASSURANCE AND CONTROL
SOP-5

In addition to routine calibration of the analytical instruments with standards and blanks, the laboratory analyst is required to run duplicates and spikes on 10 percent of the analyses to insure an added measure of precision and accuracy. Accuracy is also verified through the following:

1. U.S. Environmental Protection Agency (EPA) and State certification programs;

2. Participation in an inter-laboratory or "round-robin" quality assurance program;

3. Verification of test results with alternative method. For example, calcium may be determined by atomic absorption, ion chromatography, or titrimetric methods. Volatile organic compounds may be determined through either purge and trap or liquid-liquid extraction methods; and,

5. Miscellaneous checks of equipment accuracy. Where trace analysis is involved, purity of the solvents, reagents and gases employed is of great concern. The laboratory maintains a service contract on all major instrumentation, including gas chromatograph, atomic absorption, ion chromatography and total organic carbon analyzers. Each of these instruments are serviced and maintained regularly.

   In additional to the above laboratory QA/QC procedures Sequoia Analytical Laboratories, the selected analytical laboratory, has provided to GeoSolutions additional procedures relevant to the three type of analytical test methods to be utilized for this project. This information is included in Appendix J.

APPENDIX B

SITE SAFETY PLAN

FIELD INVESTIGATION TEAM
SITE HEALTH AND SAFETY PLAN

A. GENERAL INFORMATION

Property Owner/Client: Paul Platner GeoSolutions Project No. 05-156

Site Name: Former Peterson Property Client Project Number: N/A

Street Address: 15589 American Hill Road, Nevada City, CA 95959

Site Safety Plan Prepared by: Thomas J. Knoch Date: 04/12/06

Site Safety Officer: Mr. Paul Platner

Objectives:

Phase I - Surface soil sampling program of soils possibly impacted by VOCs, waste oil, paints and paint residual, and battery acid/lead.

Proposed Date of excavating/treatment: In April or May, 2006.

Hazard Summary/Level of Protection

A:___ B:____ C:_____ D:_X___(with modifications)

B. SITE/WASTE CHARACTERISTICS

Waste/Contaminant Type(s):__Liquid_X_Soil__Solid__ Sludge Gas

Characteristic(s):__ Corrosive _x_ Ignitable___ Radioactive
_x_ Volatile _x_Toxic ___Reactive
__ Unknown ____Other (Name):

Contaminant Source (type and location): VOCs and waste oil in soil from above ground storage drums, paints and their residuals from one gallon and one pint sized cans in soils, and acids/lead from automobile batteries in soils.

Surrounding Features include residential structures, over head power lines, moderate to steep terrain with light to moderate growth of brush and conifer trees, and intermittent drainage.

Status: Inactive except for cleanup/organizing of solid waste. Site not fenced but barred from entry at top entry roadway with lockable cable barrier.

History: Former scrap/junkyard where automobile dismantling took place over five decades.

C. HAZARD EVALUATION

Sampling program will be performed during spring season of this year when temperatures are likely to be mild without extreme hot or cold extremes. Proposed work efforts will be paced at a slow rate to ensure overheating of personnel on the sampling team is avoided. It will be expected that all on-site personnel will have already placed themselves in top physical condition to at least meet the physical requirements needed to complete the sampling program.

Potable water bottles will be available for use to ensure all sampling personnel remain hydrated. It will be expected that each individual will take personal responsibility of his/her own level of hydration by drinking at least ½ quart of water per hour. A condition the individual can monitor by checking color of urine. A clear and colorless stream indicates good hydration. Any yellowish tent in the color of urine indicates beginning of dehydration. If this condition occurs additional intake of fluids by the individual will be expected with periodic rest stops until condition is corrected per monitoring of urine color.

To help avoid bites by insects, rodents and snakes it will be expected that all individual will not insert their hands, fingers or other parts of their bodies under objects laying on the ground or into holes in the ground or under rocks. Stepping over large objects such as board, steel and rocks will be avoided-walk around. If movement of object lying on the ground is to be perform those individuals performing the work will wear gloves to protect their hands. Hats with brims will be worn to protect faces, neck and ears from sun exposure and light weight light colored long sleeved shirts will be worn. Leg pants will cover legs and upper portions of boots to protect legs from sharp thorns and only boots with hard soles will be used to help prevent stabbing injury of feet and lower portions of legs. Sampling will be performed out in the open and not in under brush therefore exposure to poison oak, etc. should be avoidable with application of good common sense.

In areas where sampling work is to be performed debris associated with former junkyard conditions has been mostly removed and stockpiled at a centralized location of the site for future transport. In these areas the surface of the site is also open to view and hidden obstacle are mostly absent. Therefore, risk of falling because of interaction with trip mechanisms is low but to help prevent personal injury from falling accidents the sampling team will attend a short tailgate safety meeting before start of work. Topics of hydration, safety measures to implement during performance of work, sun exposure, and fall prevention will be discussed.

All contaminants with a high probability of on-site presence have been identified. A list of identified or suspected on site chemicals and their maximum concentrations in soil/water is provided below. Information about hazardous properties are listed in Section H.

	Maximum Concentration: (ppm-mg/kg unless state otherwise in tables)	
Chemical Name	InSoil	In Water
Acids/lead	160	NA
Organics	Table 3	NA
VOCs	Tables 3,5,6,7	NA

(ppm) = parts per million.
NA = Not analyzed.

Free product present? ___ Yes _X_ No

Type of product present: ___ Leaded ___Unleaded ___ Diesel. No free product on site.

P= results pending.

D. SITE SAFETY WORKPLAN

PERSONNEL

Team Member	Title	Responsibility
Thomas J. Knoch	Project Geologist	Site Coordinator
Mr. Paul Platner	Property Owner	Site Safety Officer

PERIMETER ESTABLISHED

Map/Sketch Attached?	Yes X No
Site Secured?	Yes X No
Perimeter Identified?	Yes X No
Contamination zones identified? line defined?	Yes X No
Free Product?	Yes___ No X
Dissolved Product?	Yes___ No X

Site is mostly secured partially by its location in an area known for very low level of activity, and on-site characteristics including rough terrain, isolated areas of heavy brush, and barriers at top and bottom entry ways help prevent access. Site does not possess attractive nuisances and surrounding area is known mostly for its quite setting and limited human activity.

INVESTIGATION-DERIVED MATERIAL DISPOSAL:

Soils from sampling activities will be stockpiled and stored on-site until analyses are available to describe the type and concentrations of contaminants. Stockpiled soils will be underlain and covered by plastic sheeting. The excavated soil will be stored on site adjacent to its point(s) of removal in diapered plastic sheeting. As indicated in SOP 2 disposal of these materials will be a function of analytical laboratory test results and regulations. If acceptable concentrations (non detect) are encountered in any soils excavated during sampling they will be used again on-site for backfill in existing excavations.

E. PERSONAL SAFETY

SITE ENTRY PROCEDURES: Notify Mr. Paul Platner

PERSONNEL PROTECTION:

Level of protection: A___ B___ C___ D__X__

Modifications:

1. All personnel must wear a normal hat with brim, heavy boots-steel toed optional, and safety glasses and/or face shield if chipping of rock or consolidated soil is needed. No overhead work practices will be performed therefore use of hard hats is optional.

2. Neoprene gloves and tyvek suit may be worn if contact when contaminated soil is likely.

3. Hearing protection must be worn if noise levels from backhoe prevent normal conversation at a distance of three feet. Smoking, eating, or drinking is allowed on site but only in areas at least 50 feet from sampling site and the sample preparation areas/wash area.

4. Respiratory protection is dependent on conditions listed in next section.

5. No personnel are to enter or approach any existing excavation or septic pit structure where there is a danger of wall collapse or confined space entry.

IF CONFINED SPACES CONDITIONS BECOME APPLICABLE

Monitor organic vapors and oxygen before entering. If following value exceeded, do not enter:

Oxygen <20.0%

Total hydrocarbons > 5 ppm above background, if all air contaminants have not been identified.

Concentrations of specific air contaminants exceeding action levels in Section D, if all air contaminants have been identified.

If entering a confined space, monitor oxygen and organic vapors continuously.

F. EMERGENCY INFORMATION

LOCAL TELEPHONE NUMBERS:

Ambulance	911
Hospital Emergency Services	(530) 274 - 6000
Sierra Nevada Memorial Hospital, 155 Glasson Way Grass Valley, California 95945	(530) 274 – 6000 (Figure 7 For Route)
Poison Control Center	800-222-1222
Fire Department	911
Property Owners Cell Phone	(530) 277 - 7251
Consultant's Cell Phone	(916) 995 – 1230

Most work performed during implementation of the sampling program outline herein will be completed with use of hand tools used in acquiring soil samples. Therefore, any possible injuries will most likely be minor cuts, punctures and scraps. In the event of this type of injury a decision will first be made to define the appropriate type of action, then it will be implemented. Mr. Paul Platner has been designated the Site Safety Officer because he has greater knowledge of the site and has been working on the property during its clean up over the past several months. He will ensure the presence of a first aid kit for use in the event of minor injury. On site work has been completed with a crew of workers operating under guidance of an existing site safety plan prepared by Mr. Platner. This soil sampling workplan outlined herein with this site safety plan will become part of a larger integrated site safety plan with inclusion of Mr. Platner's existing Site Safety Plan included herein as Appendix L. If transport of an injured individual to the hospital is required the person's suit, boots, hat and gloves will be cut off and removed prior to transport to the hospital.

As will be stated during a safety tailgate meeting at the beginning of on-site sampling work, all ground personnel will stay outside the swing of any implements attached to the backhoe tractor during is operation. Also, ground personnel will take responsibility of their own personal safety when around the working tractor by making sure they get and keep eye-to-eye contact with the tractor's operator before approaching him if conversation is needed to guide his digging efforts. No ground personnel will approach the tractor until the operator gives a hand-off-controls signal to any approaching individual.

SITE RESOURCES:

Water supply available on site:	Yes X No
Property owner will provide a tank of water and make it available for use during washing. Potable water will also be available for drinking.	
Cell telephone available on site	Yes X No
Bathrooms available on site:	Yes__ No X
Other resources available on site:	Yes__ No X

Phone services provided by cell phone numbers identified above.

Nearest potable water will be on site and bathroom facilities for number 2 is located in town of Nevada City. Travel time to these businesses is within 5 minutes. Again, potable drinking water will be available in containers on site.

EMERGENCY CONTACTS	PHONE NO.
1. Paul Platner	(530) 277-7251
2. Health and Safety Officer: Thomas Knoch	(916) 995-1230
4. Site Contact: Thomas J. Knoch	(916) 995-1230
5. Regulatory Contacts: NCPD-Grant Eisen	(530) 265-1469
6. DTSC – Mr. Eric Wallberg (Cell)	(916) 591-8057

G. EMERGENCY ROUTES

The Sierra Nevada Memorial Hospital ((530) 274-6000) is located at 155 Glasson Way, Grass Valley, CA 95945. This hospital is the closest medical emergency response facilities and is located approximately eight miles away from the subject site towards a southerly direction. With weighted average travel speed of 45 miles per hour (0.75 miles/minute) the estimated travel time from site to hospital is approximately 11 minutes. Directions to the hospital from the subject site are as follows:

1. Drive in a easterly direction along American Hill Road to Bennett Street and continue along Bennett to its intersection with Broad Street.

2. Turn right onto Broad Street and travel easterly to the Highway 49 (South) on ramp.

3. Turn right onto the on ramp of Highway 49 and take the highway south about two miles and exit the freeway at the Brunswick Road exit.

4. Turn right onto Brunswick and then an immediate left onto East Main Street at the "T".

5. Travel is a westerly direction on East Main Street to the first traffic light and turn left at this light onto Dorsey Drive and travel in a southerly direction.

6. While traveling south on Dorsey Drive take the second street to the right onto Catherine Lane.

7. Take the second street on the left off from Catherine and onto Glasson Way. Travel in a southerly direction up hill on Glasson Way and onto the hospital grounds. Emergency room entrance is signed. Reference Figure 4 for a map of the preferred vehicular route from the subject site to the hospital.

HOSPITAL: Sierra Nevada Memorial Hospital - 155 Glasson Way, Grass Valley, CA 95945 (530) 274 - 6000.

H. HAZARD EVALUATION FOR POTENTIAL FUEL SOURCES

Per laboratory test results on soil sample collected in initial soil sampling program there were no soil samples (worst case G4 surface and G4-1 ½ feet) with concentrations of contaminates remotely approaching TLV concentration levels outlined below (See analytical test results outlined in Table 3 and contained in Appendix D). Also,bio-degradation of VOCs over decades of time since dismantling operations have occurred have likely implemented a strong decreasing influence on existing levels of volatiles in near surface soils.

PARAMETER	TLV (ppm)	OT (ppm)	IDLH (ppm)	VOLA-TILITY	SKIN HAZARD	EXPLO-SIVITY
Benzene	0.1	4	2,000	H	L	H
Ethylbenzene	100	NS	2,000	M	L	H
Toluene	100	2	2,000	M	L	H
Xylene	100	<1	10,000	H	M	H
Gasoline	300	NS	NS	H	L	H

KEY:
- OT = Odor theshold
- TLV = Threshold limit value (Worker - 8 hours)
- IDLH = Immediately dangerous to life and health
- NS = None specified
- H = High
- M = Medium
- NR = Not reported
- L = Low
- U = Unknown

HAZARDOUS PROPERTY INFORMATION

Explanations and Footnotes

Water solubility is expressed in different terms in different references. Many references use the term "insoluble" for materials that will not readily mix with water, such as gasoline. However, most of these materials are water soluble at the parts-per-million or parts-per-billion level. Waste oil, diesel, and gasoline for example, are insoluble in the gross sense and can be found as a discreet layer on top of water. But certain constituents, such as benzene, toluene, and xylene will also be found in solution in water at the parts-per-million or parts-per-billion level.

A. Water solubility expressed as 0.2g means 0.2 grams per 100 grams water at 20°C.

B. Solubility of metals depends on the compound and pH of solution.

C. Several chlorinated hydrocarbons exhibit no flash point in conventional sense, but will burn in presence of high energy ignition source or will form explosive mixtures at temperatures above 200°F.

D. Are practically non-flammable under standard conditions.

E. Expressed as mm Mercury (Hg) under standard conditions

F. Explosive concentrations of airborne dust can occur in confined areas.

G. Values for Threshold Limit Value - Time Weighted Average (TLV-TWA) are OSHA Permissible Exposure Limits (PEL) except where noted in H. and I.

H. TLV - TWA adopted by the American Conference of Government Industrial Hygienists (ACGIH) which is lower than the OSHA PEL.

I. TLV - TWA recommended by the National Institute for Occupational Safety and Health (NIOSH). A agreed on TLV or PEL has not been adopted by the ACGIH or OSHA.J.
A. - Corrosive
B. - Flammable
C. - Toxic
D. - Volatile
E. - Reactive
F. - Radioactive
G. - Carcinogen
H. - Infectious
K. - Dermal Toxicity data is summarized in the following three categories:

Skin penetration

A. - negligible penetration (solid-polar)
B. - slight penetration (solid-nonpolar)
C. - moderate penetration(liquid-nonpolar)
D. - high penetration (gas/liquid-nonpolar)

Systemic Potency

A. - slight hazard - LD_{50} = 500-15,000 mg/kg
lethal dose for 70 kg man = 1 pint-1 quart
B. - moderate hazard - LD_{50} = 50-500 mg/kg
lethal dose for 70 kg man = 1 ounce-1 pint
C. - extreme hazard - LD_{50} = 10-50 mg/kg
lethal dose for 70 kg man = drops to 20 ml

Local Potency

A. - slight - reddening of skin
B. - moderate - irritation/inflammation of skin
C. - extreme - tissue destruction/necrosis

Acute Exposure Symptoms

A. - abdominal pain
B. - central nervous system depression
C. - comatose
D. - convulsions
E. - confusion
F. - dizziness
G. - diarrhea
H. - drowsiness
I. - eye irritation
J. - fever
K. - headache
L. - nausea
M. - respiratory system irritation
N. - skin irritation
O. - tremors
P. - unconsciousness
Q. - vomiting
R. - weakness

HAZARDOUS PROPERTY INFORMATION – FUELS

SEE APPENDIX M

HAZARDOUS PROPERTY INFORMATION - VOLATILE ORGANIC PRIORITY POLLUTANTS

SEE APPENDIX M

HAZARDOUS PROPERTY INFORMATION - VOLATILE ORGANIC PRIORITY POLLUTANTS (CONTINUED)

SEE APPENDIX M

HAZARDOUS PROPERTY INFORMATION - VOLATILE ORGANIC PRIORITY POLLUTANTS (CONTINUED)

SEE APPENDIX M

HAZARDOUS PROPERTY INFORMATION - HEAVY METALS

SEE APPENDIX M

HAZARDOUS PROPERTY INFORMATION - MISCELLANEOUS

SEE APPENDIX M

APPENDIX C

SAMPLING REPORT FOR NEIL PETERSON-AMERICAN HILL PROPERTY, 15589 AMERICAN HILL ROAD, NEVADA CITY, CA 95959 SEPTEMBER 15, 2003, EPA ID NUMBER: NONE

APPENDIX D

ANALYTICL LAABORTORY TEST RESULTS FOR FINDINGS PRESENTED IN TABLE 3

APPENDIX E

COMMUNITY PROFILE

APPENDIX F

CONCEPTUAL SITE MODEL

APPENDIX G

HARD COPY OF REFERENCED DOCUMENTS OUTLINED IN SECTION 11.0 TITLED REFERENCES (Exception Is Reference 15 Already In Appendix C)

APPENDIX H

INITIAL SITE INVESTIGATION WORKPLAN ON THE FORMER PETERSON PROPERTY, DATED 10/20/05

APPENDIX I

ALL DOCUMENTATION PROVIDED BY PROPERTY OWNER RELATED TO LOADING, TRANSPORT, AND DISPOSAL OF CONTAINERS

APPENDIX J

ANALYTICAL SERVICES QUOTATION WITH MDLs, REPORTING LIMITS, LABORATORY QA/QC

APPENDIX K

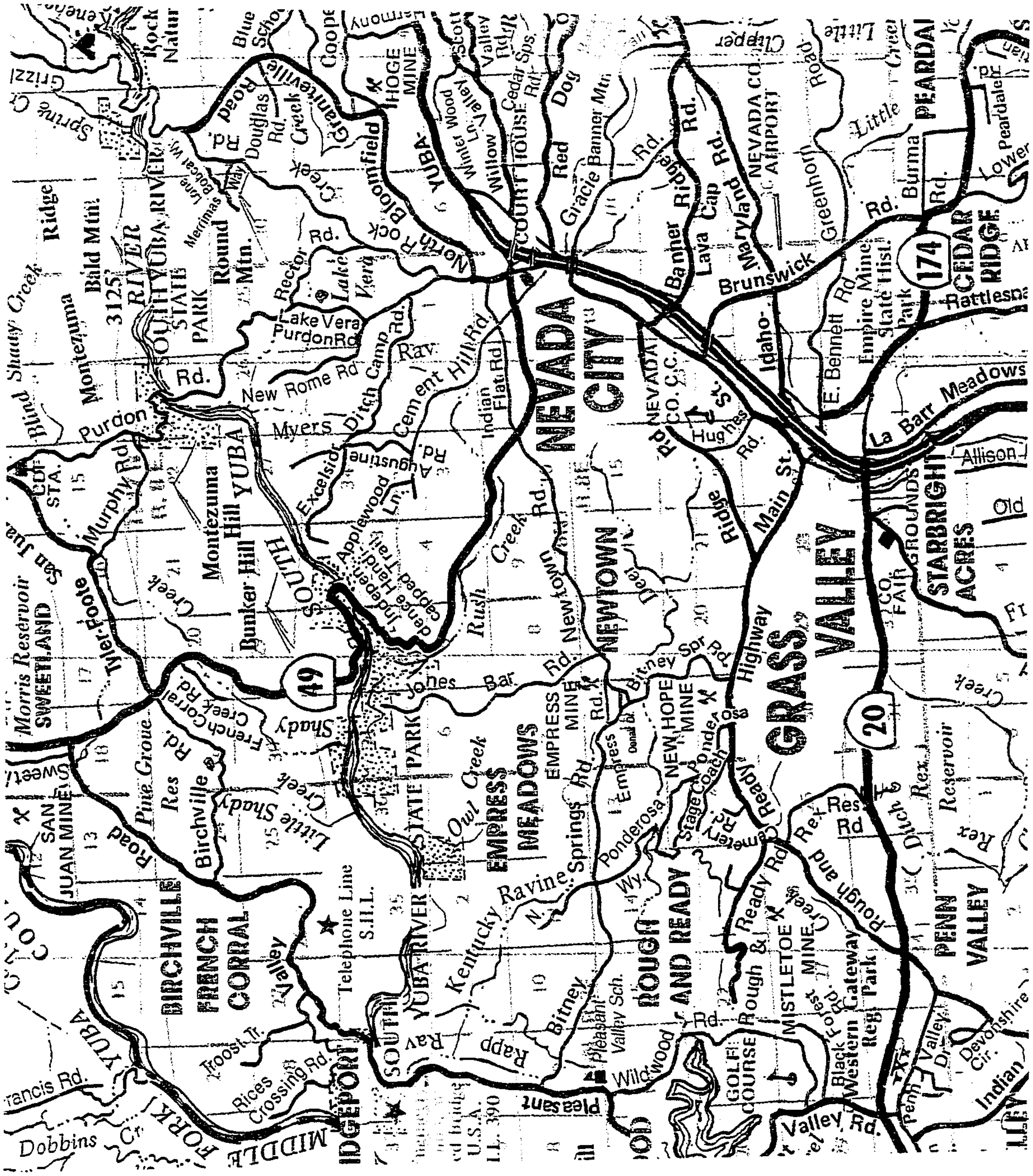
SAMPLES OF DAILY SITE ACTIVITY LOG, SOIL PROFILE LOG, PHOTO JOURNAL LOG, AND HEALTH AND SAFETY LOG IN/OUT SHEET

APPENDIX L

WORKPLAN & SITE SAFETY PLAN FOR THE AMERICAN HILL PROPERTY BY PLATNER & ASSOCIATES, INC., DATED AUGUST 12, 2005

APPENDIX M

HAZARDOUS PROPERTIES INFORMATION TABLES FOR SITE SAFETY PLAN LOCATED IN APPENDIX B



← NORTH

SCALE 1" = 2 Miles

GEO ∇ SOLUTIONS

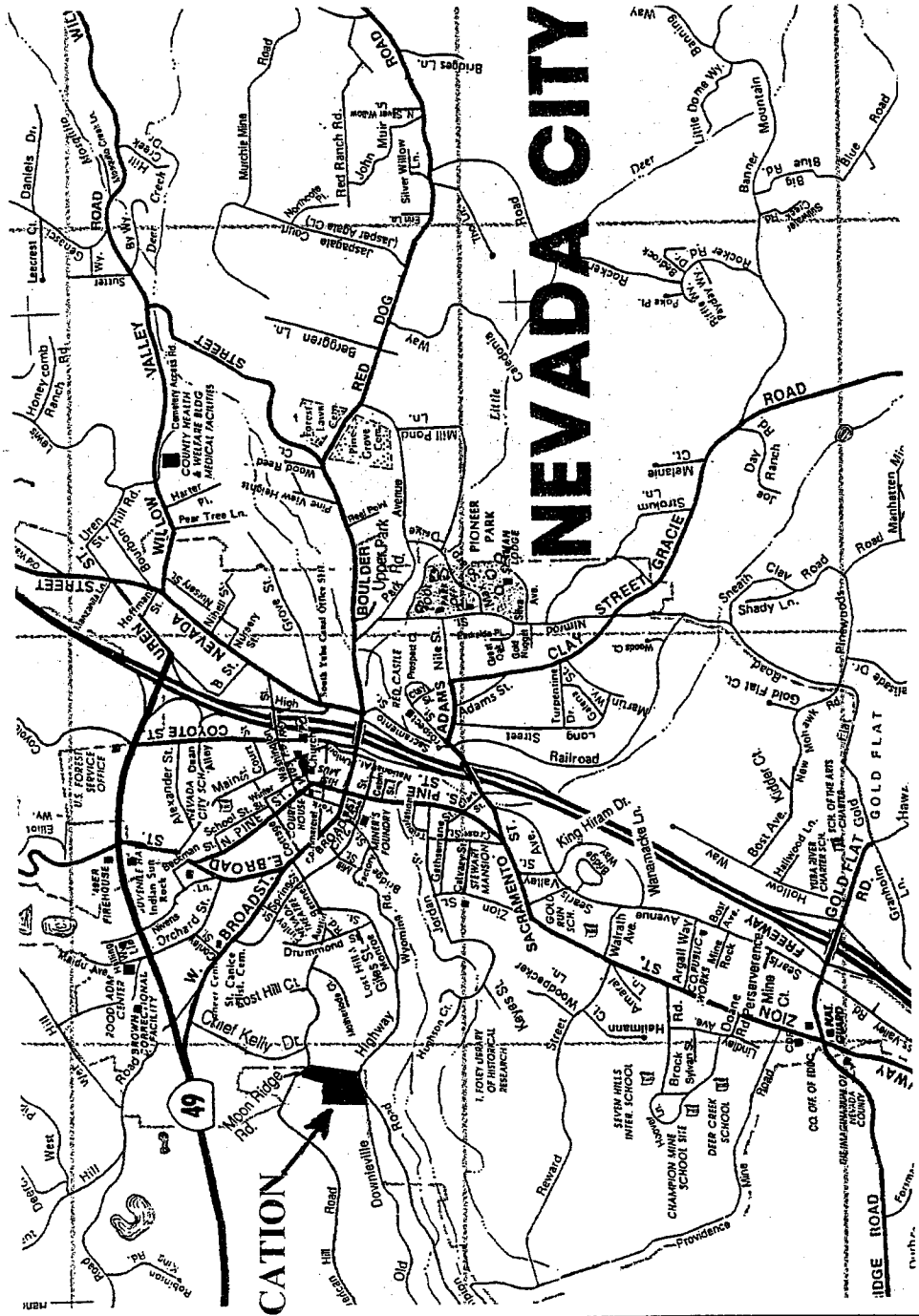
P. O. BOX 1685 Cedar Ridge, CA 95924

PETERSON PROPERTY INVESTIGATION

15589 American Hill Road Nevada County, CA

SITE VICINITY MAP

Figure No. 1	Date: 10/15/05	Project: 05-156



GEO ▽ SOLUTIONS

P. O. BOX 1685 Cedar Ridge, CA 95924

PETERSON PROPERTY INVESTIGATION

15589 American Hill Road Nevada County, CA

SITE LOCATION MAP

Figure No. 2	Date: 10/15/05	Project: 05-156